# Gap Analysis Program (GAP)

## The Road Ahead

# Why We Need the GAP

- Hurricane Katrina – We Can't Afford to Wait
- Katrina Reform Act – Authorizes FEMA Not to Have to Wait
- Stafford Act – Accelerated Federal Assistance
- Reality – An Effective Response Requires/Demands Coordination With the States & Interagency Community
- GAP Enables FEMA & Its Emergency Management Partners to Be in Better Position to Provide Assistance When Needed

# Purpose of GAP

- Work in Partnership With the States to Identify AND Address Shortfalls, Vulnerabilities, “Gaps”
- A “Gap” Is the Difference Between a Perceived Need Based on Local Conditions and Demographics and the Capability of the Local Jurisdiction, State or Federal Government to Fill or Address that Estimated Need
- Enable the States and Local Jurisdictions AND FEMA and Its Interagency Partners to Better Prepare to Meet Potential Demands Prior to the Next Major Event

# Background – GAP

- GAP Began As Pilot Program March 12, 2007 – NYC SLIP
- Five Atlantic Hurricane-Prone Regions Composed of 17 States, the District of Columbia, Puerto Rico & the USVI:
  - Region I: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut
  - Region II: New York, New Jersey, Puerto Rico, Virgin Islands
  - Region III: Maryland, Virginia, Delaware, District of Columbia
  - Region IV: South Carolina, North Carolina, Georgia, Alabama, Mississippi
  - Region VI: Texas & Louisiana
- Originally Focused on Seven Critical Areas:
  - Evacuation, Medical Needs, Debris Removal, Commodity Distribution, Sheltering, Interim Housing, Fuel Availability
  - Communications Being Run Concurrently by CIO

# Looking Forward

- What Needs to Be Done to Make the Current Program More Efficient, Effective & Less Burdensome to All Participants?

- What Should Be Done in the Weeks & Months Ahead to Improve the Program as We Move from Pilot "Project" Status to Full Fledged FEMA "Program" & Expand Across the Country & Apply GAP To All Hazards

# The Steps Forward

- Established an Engaged Partners Work Group comprised of representatives from pilot Regions & non-pilot Regions, ESFs, States, locals, private sector & NGOs to revise the GAP Tool to be:
  - User Friendly – clear & simple
  - Quantitative - questions must seek readily available answers; eliminate subjectivity
  - Flexible – library of templates that can individually be applied to specific geographic location & potential disaster
  - Consistent/Uniform – clearly define all terms/definitions to ensure survey results are interpreted uniformly
  - Updated – Debris removal refers to debris along evacuation routes; interim housing is a Disaster Assistance responsibility post the first 72 hour period

# The Steps Forward Cont'd

- Link grant funding to States/Locals participation in GAP activities & surveys to provide leverage to ensure they support our capability to support them during a crisis
- Greater reliance on modeling capabilities to assist jurisdictions in projecting in the GAP data collection process
- Incorporate a "statistically valid sampling" capability to assist in analyzing the data collected
- Simplify Region/HQs reporting requirements by combining the requirements of Disaster Assistance, Disaster Operations, Logistics & Communications into one submission, thereby, eliminating duplication or overlap

# Elements of the GAP as it Expands to All Hazards

## Data Collection Methodology

Establish Regional **Workshops** to Create a Collaborative Environment among States & Local Jurisdictions in which to Collect the GAP Information & thereby:

- Minimize “double dipping” from same pool of resources to fill identified shortfalls
- Enhance the level of trust by bringing all parties together to both address the “gaps” AND validate the identified needs/requirements

Regions MUST Provide Input into How to Design These Workshops to Work Best within Each Individual Region

# Elements of the GAP as it Expands to All Hazards cont'd

## Data Collection Templates

Revised Questions/Templates:

- Commodities Distribution
- Emergency Debris Clearance
- Transportation and Evacuation
- Sheltering/Mass Care: General Population; Companion Animals; Special Needs
- Search and Rescue
- Fuel and Emergency Power
- Medical (Still in development with HHS – GAP, NMSZ, FLCP)

# Commodities Distribution

| | |
|---|---|
| **Mission:** | Critical resources are available to incident managers and emergency responders upon request for proper distribution and to aid the affected population in a cost-effective and timely manner. |
| **Jurisdiction Name:** | |
| **State/Territory/** | |

## Readiness Indicators

| Indicator | Response | Standard Used |
|---|---|---|
| Do jurisdiction commodities distribution plans exist covering staffng, setup, distribution locations and operations? | Yes ☐ No ☐ | |
| Do capabilities (personal, equipment, offload capability and resources) exist to establish fully functional distribution site for affected communities? | Yes ☐ No ☐ | |
| Have you identified and prioritize critical commodities for distribution (water, MREs, cots, blankets, etc)? | Yes ☐ No ☐ | |
| Will you need support for distribution (for shelters and general population)? | Yes ☐ No ☐ | |
| Have jurisdictional staging areas to serve several jurisdictions been identified? | Yes ☐ No ☐ | |
| Are there written agreements in place to procure commodities? | Yes ☐ No ☐ | |
| Do you have any reliance on the private sector? | Yes ☐ No ☐ | |
| Have you developed a pre and post impact public awareness campaign for commodity distribution? | Yes ☐ No ☐ | |

## Quantifiable Date

| <<Insert Jurisdiction Name>> | Jurisdictional Capabilities | | | Contracted Amounts | | MOUs/MOAs/EMAC Amounts | | Non-Jurisdiction Resources already in place | | Federal Resources already in place (pre-po) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Item | Qty | Unit | Qty | Unit | Qty | Unit | Qty | Unit | Qty | Unit |
| | Water | | Liters | | liters | | liters | | liters | | liters |
| | Ice | | lbs | | lbs | | lbs | | lbs | | lbs |
| | Meals | | Each | | each | | each | | each | | each |
| | PPDS | | 20' | | 20' | | 20' | | 20' | | 20' |
| | PPDS | | 40' | | 40' | | 40' | | 40' | | 40' |
| | HRK | | Each | | each | | each | | each | | each |
| | Cots | | Each | | each | | each | | each | | each |
| | Blankets | | Each | | each | | each | | each | | each |
| | Tarps | | Each | | each | | each | | each | | each |
| | Blue Roof Sheeting | | Each | | each | | each | | each | | each |
| | Generator | | Each | | each | | each | | each | | each |
| | ID Dist Sites | | Locations | | Locations | | Locations | | Locations | | Locations |
| | ID Dist Staff | | Individuals | | Individuals | | Individuals | | Individuals | | Individuals |
| | MHE | | Each | | each | | each | | each | | each |

| <<Insert Jurisdiction Name>> | Pop req support: <<TBD>> | Total Resources From Input Worksheet | | | Required Need Based on Modeling Per Day | | Required Need Based on Modeling 3 Days | | Required Need Based on Modeling 7 Days | | Gap | | Required Support | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Item | Qty | Unit | Qty | Unit | Qty | Unit | Qty | Unit | Qty | Unit | Qty | Unit |
| | | Water | | Liters | | liters | | liters | | liters | | liters | | liters |
| | | Ice | | lbs | | lbs | | lbs | | lbs | | lbs | | lbs |
| | | Meals | | Each | | each | | each | | each | | each | | each |
| | | PPDS | | 20' | | 20' | | 20' | | 20' | | 20' | | 20' |
| | | PPDS | | 40' | | 40' | | 40' | | 40' | | 40' | | 40' |
| | | HRK | | Each | | each | | each | | each | | each | | each |
| | | Cots | | Each | | each | | each | | each | | each | | each |
| | | Blankets | | Each | | each | | each | | each | | each | | each |
| | | Tarps | | Each | | each | | each | | each | | each | | each |
| | | Blue Roof Sheeting | | Each | | each | | each | | each | | each | | each |
| | | Generator | | Each | | each | | each | | each | | each | | each |
| | | ID Dist Sites | | Locations | | Locations | | Locations | | Locations | | Locations | | Locations |
| | | ID Dist Staff | | Individuals | | Individuals | | Individuals | | Individuals | | Individuals | | Individuals |
| | | MHE | | Each | | Each | | Each | | Each | | Each | | Each |

## Debris Clearance

| | |
|---|---|
| **Mission:** | The capability of a jurisdiction to clear critical roads of debris in the first 72 hours to assist and support the affected population |
| **Jurisdiction Name:** | |
| **State/Territory/ Commonwealth:** | |

## Readiness Indicators

| Indicator | Response | Standard Used |
|---|---|---|
| Has the jurisdiction mapped critical road access which need to be cleared within the first 72 hours? | Yes ☑ No ☐ | |
| Does the jurisdiction have experience clearing roads (snow clearance, storm debris clearance history, etc)? | Yes ☐ No ☐ | |
| Does the jurisdiction have equipment to clear road debris (snow plows, chain saws, PPEs, etc)? | Yes ☐ No ☐ | |
| Has the jurisdiction a plan in place for critical road clearance within the first 72 hours? | Yes ☐ No ☐ | |
| Does the jurisdiction have debris estimating capabilities in place? | Yes ☐ No ☐ | |
| | Yes ☐ No ☐ | |
| | Yes ☐ No ☐ | |
| | Yes ☐ No ☐ | |

## Quantifiable Date

| <<Insert Jurisdiction Name>> | Jurisdictional Capabilities | | | Contracted Amounts | | MOUs/MOAs/EMAC Amounts | | Non-Jurisdiction Resources already in place | | Federal Resources already in place | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Item | Qty | Unit | Qty | Unit | Qty | Unit | Qty | Unit | Qty | Unit |
| | Critical Roads | | Miles | | Miles | | Miles | | Miles | | Miles |
| | Hand Crews | | Each = loader, dump truck, driver & safety personnel | | Each = loader, dump truck, driver & safety personnel | | Each = loader, dump truck, driver & safety personnel | | Each = loader, dump truck, driver & safety personnel | | Each = loader, dump truck, driver & safety personnel |
| | Chain-saw Crews | | Each =5 personnel, safety personnel, vehicle, 5 chainsaws | | Each =5 personnel, safety personnel, vehicle, 5 chainsaws | | Each =5 personnel, safety personnel, vehicle, 5 chainsaws | | Each =5 personnel, safety personnel, vehicle, 5 chainsaws | | Each =5 personnel, safety personnel, vehicle, 5 chainsaws |
| | | | | | | | | | | | |

| Jurisdiction Name>> | clearance: <<TBD>> | Worksheet | | Based on Modeling Per Day | | Based on Modeling 3 Days | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Qty | Unit | Qty | Unit | Qty | Unit | Qty | Unit | Qty | Unit |
| | | Critical Roads | | Miles | | Miles | | Miles | | Miles | | Miles |
| | | Hand Crews | | Each = loader, dump truck, driver & safety personnel | | Each = loader, dump truck, driver & safety personnel | | Each = loader, dump truck, driver & safety personnel | | Each = loader, dump truck, driver & safety personnel | | Each = loader, dump truck, driver & safety personnel |
| | | Chain-saw Crews | | Each = 5 personnel, safety personnel, vehicle, 5 chainsaws | | Each = 5 personnel, safety personnel, vehicle, 5 chainsaws | | Each = 5 personnel, safety personnel, vehicle, 5 chainsaws | | Each = 5 personnel, safety personnel, vehicle, 5 chainsaws | | Each = 5 personnel, safety personnel, vehicle, 5 chainsaws |
| | | Debris Staging Areas | | Site | | Site | | Site | | Site | | Site |
| | | Debris Mngmt Teams | | Teams | | Teams | | Teams | | Teams | | Teams |
| | | Debris Removal Equip | | Each | | Each | | Each | | Each | | Each |

# Elements of the GAP as it Expands to All Hazards cont'd

## Emergency Management Performance Grants -FY2008

Participating in the FEMA Gap Analysis Program is explicitly cited as both an allowable expense under EMPG and as a priority in the FY07 EMPG Supplemental guidance:

(PAGE 2) …"With FEMA working in partnership with State and local jurisdictions to identify and address gaps, regional and national planning processes can be improved collaboratively to meet future events. Addressing the findings of the gap analysis, and similar capability assessment efforts, and assisting state and local jurisdictions to address national and regional catastrophic planning needs is the principal priority for the FY 2007 EMPG supplemental funds."

(PAGE 8) …"State and local jurisdictions are strongly encouraged to leverage EMPG funds to participate in the FEMA gap analysis program and related future efforts to help identify and address catastrophic planning needs."

Thus, states have the flexibility to allocate as much of their EMPG funding to participating in the Gap Analysis Program.

All EMPG applicants must submit a Supplemental Work Plan that outlines the State's emergency management sustainment & enhancement efforts, including projects, proposed for the FY 2008 EMPG supplemental period of performance.

# Elements of the GAP as it Expands to All Hazards cont'd

## Data Collection Database

- Repository for all relevant data used to determine capabilities/needs
- Controlled access to State & local data as appropriate
- Captures data in real time to ensure that data is current (as opposed to extracted data that typically lags actual data production).
- Web-based, local data may be mirrored where possible, to ensure availability in case disaster limits access to the local source
- Links to numerous databases such as Census data
- entelliTrak™ – enables data management, tracking, retrieval & reporting without the need for extensive custom development; serves as a data collection warehouse capable of accessing data in real time

C:\Documents and Settings\David Hildreth\My Documents\New Folder

File Edit View Favorites Tools Help

Folders

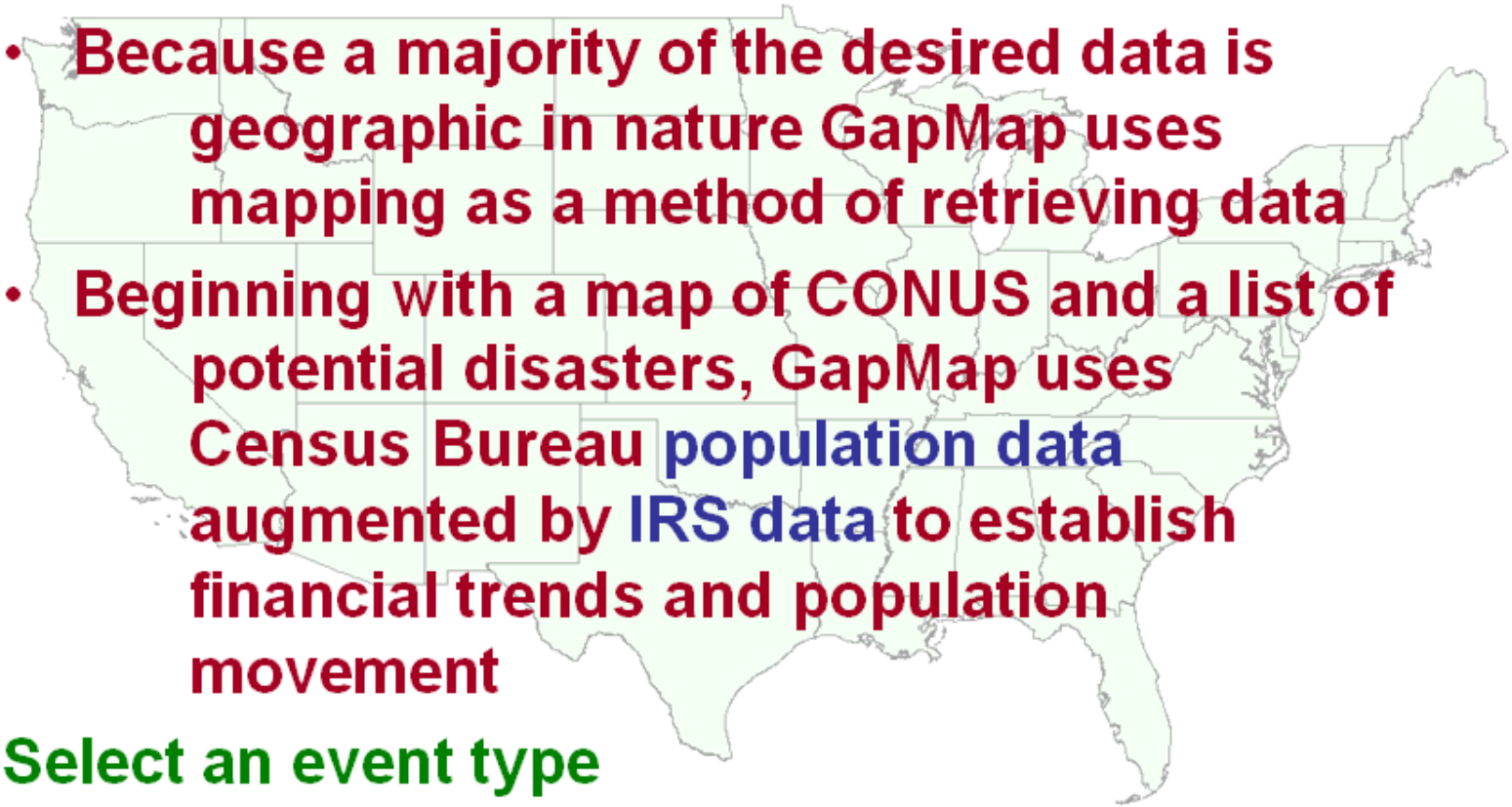
Name Size Type Date Modified

Select Event Type

Blizzard
Civil Strife
Coastal Storm
Crash/Explosion
Drought
Earthquake
Fire
Flood
Flood/Mudslide
Hurricane
Ice Storm
Land Slides
Landslide
Northeaster
Pandemic
Severe Storm
Severe Winter Storm
Snow Storm
Subsidence/Collapse
Terrorism
Tornado
Tropical Storm
Tsunami
Typhoon
Volcano

# GapMap Applications

- GapMap is designed to be an All Hazards application
- Because a majority of the desired data is geographic in nature GapMap uses mapping as a method of retrieving data
- Beginning with a map of CONUS and a list of potential disasters, GapMap uses Census Bureau population data augmented by IRS data to establish financial trends and population movement



Select an event type

C:\Documents and Settings\David Hildreth\My Documents\New Folder

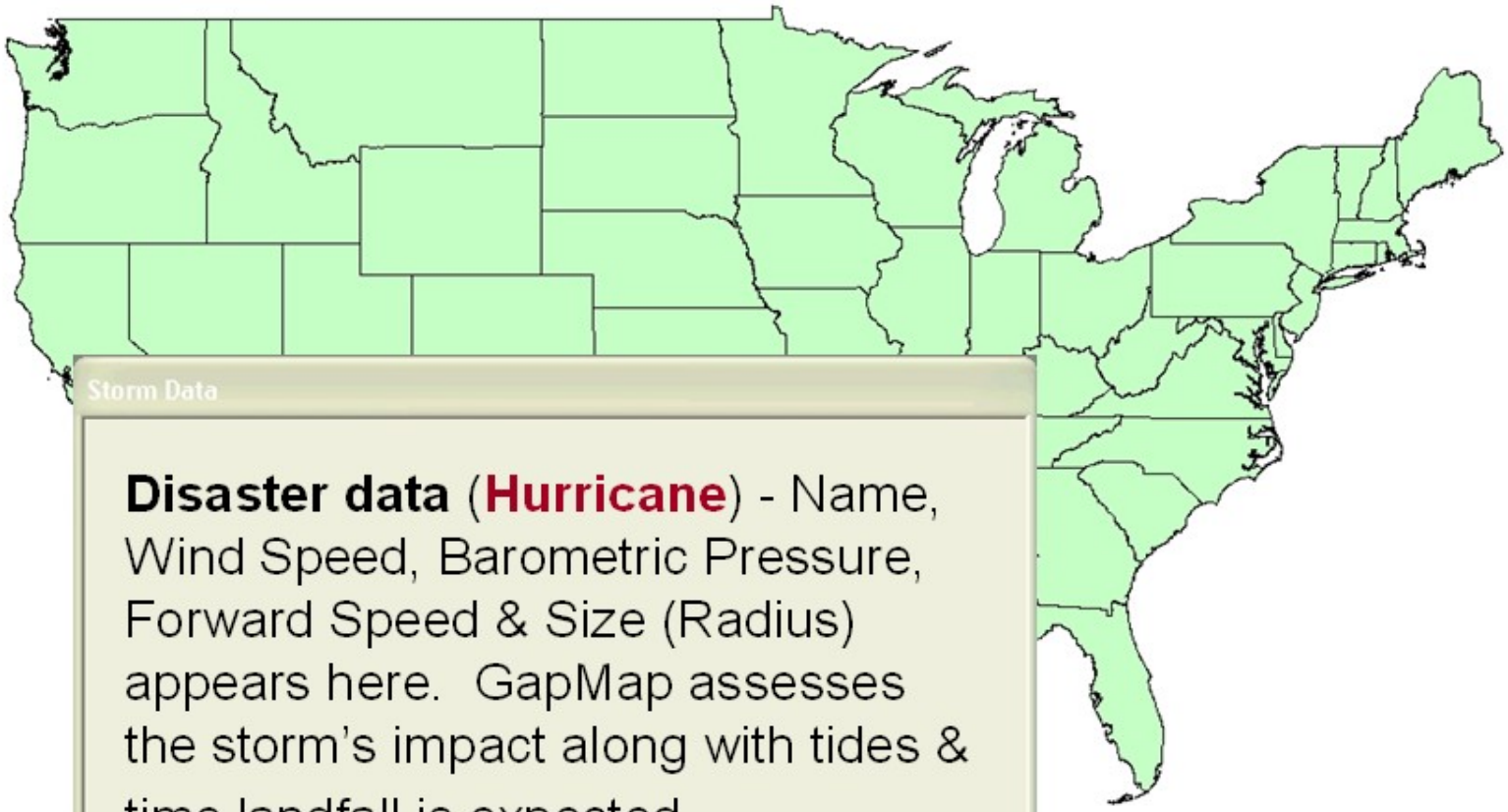
File Edit View Favorites Tools Help

Folders

Name Size Type Date Modified

Select Event Type

- Blizzard
- Civil Strife
- Coastal Storm
- Crash/Explosion
- Drought
- Earthquake
- Fire
- Flood
- Flood/Mudslide
- Hurricane
- Ice Storm
- Land Slides
- Landslide
- Northeaster
- Pandemic
- Severe Storm
- Severe Winter Storm
- Snow Storm
- Subsidence/Collapse
- Terrorism
- Tornado
- Tropical Storm
- Tsunami
- Typhoon
- Volcano



Storm Data

**Disaster data** (**Hurricane**) - Name, Wind Speed, Barometric Pressure, Forward Speed & Size (Radius) appears here. GapMap assesses the storm's impact along with tides & time landfall is expected.

**Enter storm statistics**

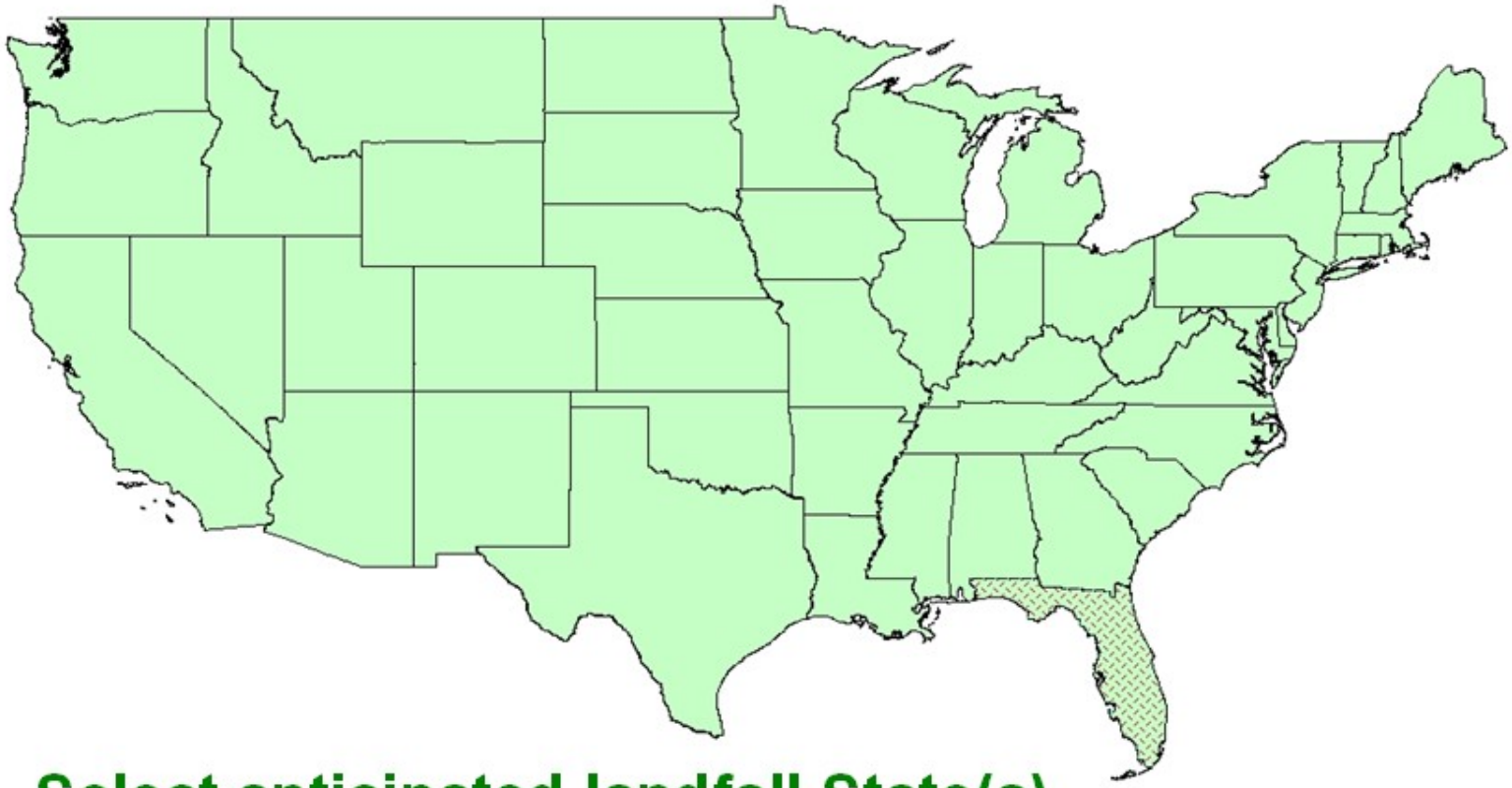
C:\Documents and Settings\David Hildreth\My Documents\New Folder

File Edit View Favorites Tools Help

Folders

Name Size Type Date Modified

Select States



Zoom In

Zoom Out

## Select anticipated landfall State(s)

Population | Evacuation | Special Needs | Topography | Economics | Shelters | Calendar | History | Hazards | Utilities | Support | References | Transportation

Food/MREs | Water | Ice | Blankets/Cots | Tarps | Fuel | Communications | Hospitals | Nursing Homes | Clinics | Fire Fighters | Ambulaces

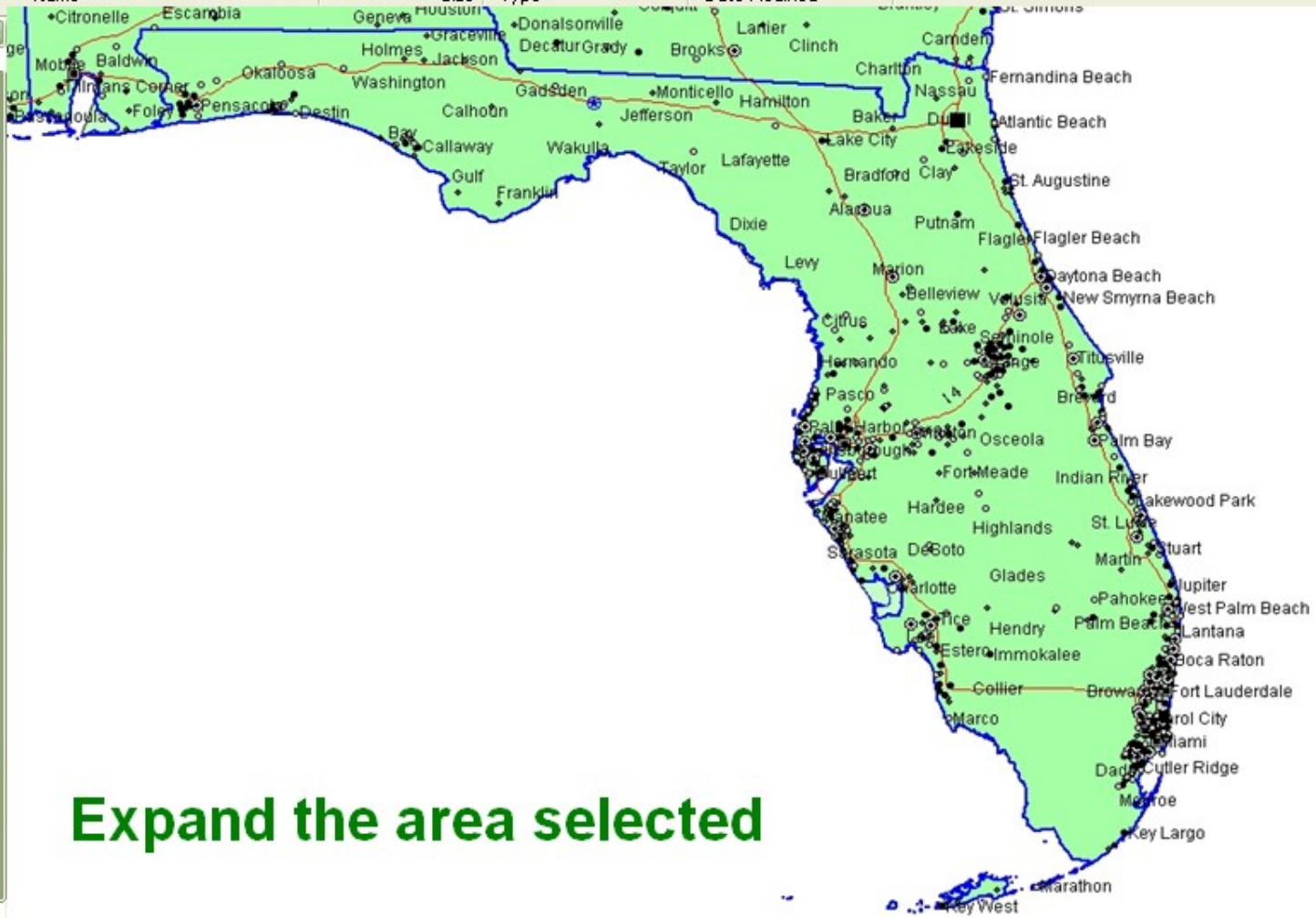
C:\Documents and Settings\David Hildreth\My Documents\New Folder

File Edit View Favorites Tools Help

Folders

Name | Size | Type | Date Modified

Zoom or Select Target Area



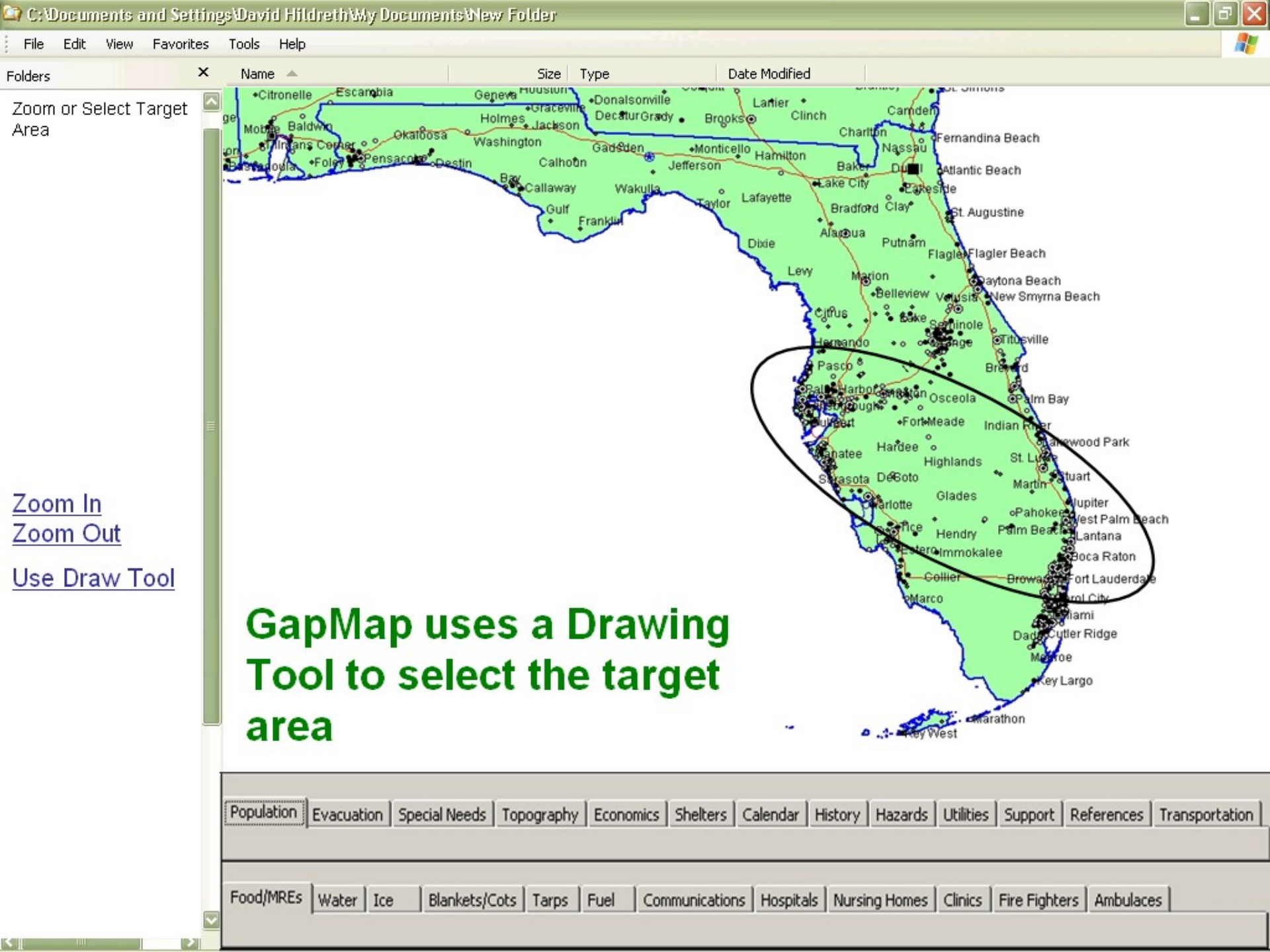

Zoom In
Zoom Out

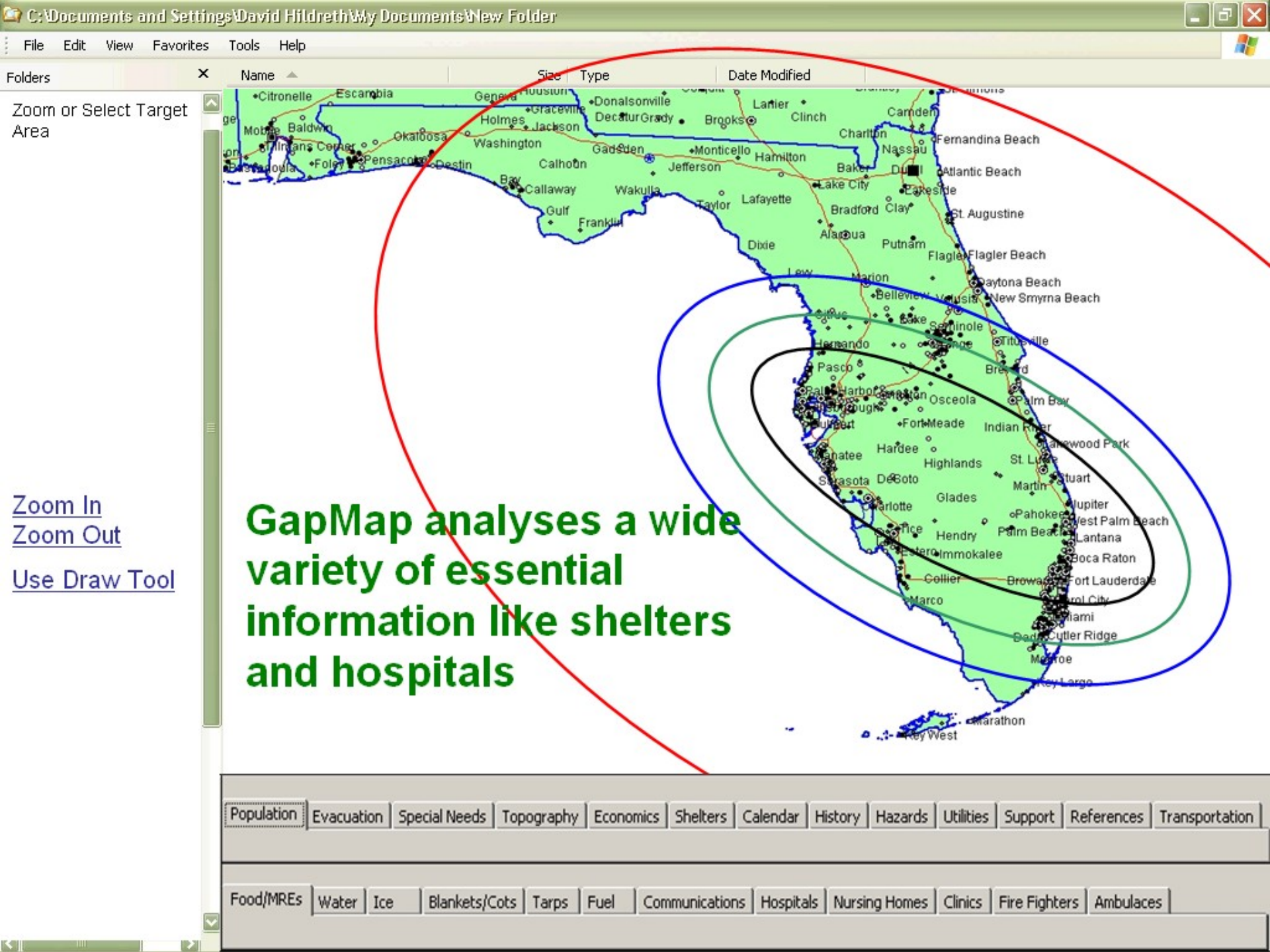
Use Draw Tool

**Expand the area selected**

Population | Evacuation | Special Needs | Topography | Economics | Shelters | Calendar | History | Hazards | Utilities | Support | References | Transportation

Food/MREs | Water | Ice | Blankets/Cots | Tarps | Fuel | Communications | Hospitals | Nursing Homes | Clinics | Fire Fighters | Ambulaces


C:\Documents and Settings\David Hildreth\My Documents\New Folder
File Edit View Favorites Tools Help
Folders
Name Size Type Date Modified
Zoom or Select Target Area
Zoom In
Zoom Out
Use Draw Tool
GapMap uses a Drawing Tool to select the target area
Population Evacuation Special Needs Topography Economics Shelters Calendar History Hazards Utilities Support References Transportation
Food/MREs Water Ice Blankets/Cots Tarps Fuel Communications Hospitals Nursing Homes Clinics Fire Fighters Ambulaces


C:\Documents and Settings\David Hildreth\My Documents\New Folder
File Edit View Favorites Tools Help
Folders
Name Size Type Date Modified
Zoom or Select Target Area
Zoom In
Zoom Out
Use Draw Tool
GapMap analyses a wide variety of essential information like shelters and hospitals
Population Evacuation Special Needs Topography Economics Shelters Calendar History Hazards Utilities Support References Transportation
Food/MREs Water Ice Blankets/Cots Tarps Fuel Communications Hospitals Nursing Homes Clinics Fire Fighters Ambulaces

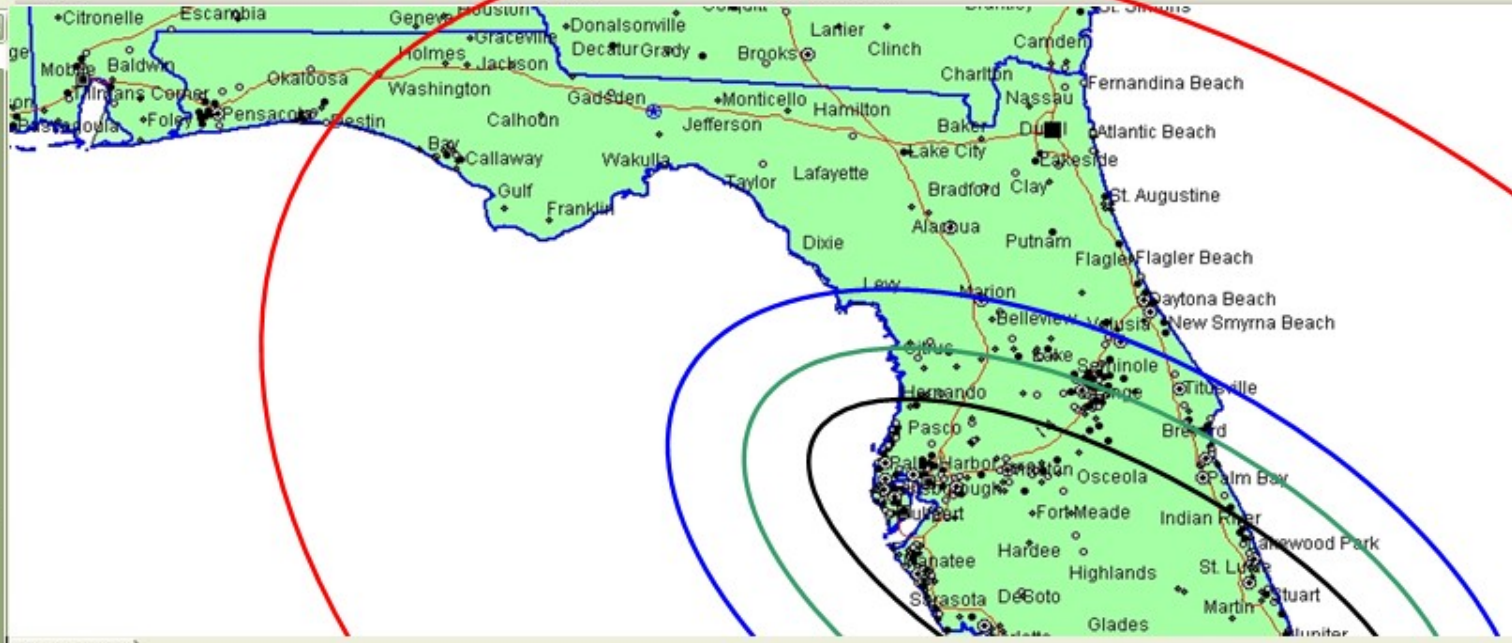
C:\Documents and Settings\David Hildreth\My Documents\New Folder

File Edit View Favorites Tools Help

Folders

Name Size Type Date Modified

Zoom or Select Target Area




Zoom In
Zoom Out

Use Draw Tool

Population

| | | |
|---|---|---|
| Population in Designated Area | | 12,8756,324 |
| Income > 100,000 | | 567,034 |
| > 75,000 | | 8,996,700 |
| > 50,000 | | 1,998,475 |
| > 30,000 | | 675,430 |
| > 25,000 | | 345,790 |
| < 24,999 | | 256,886 |
| Poverty Level | $ 23,775 | |
| Families with Vehicles | | 1,765,906 |
| Population Within 1 Mile of East Coast | | 6,445,398 |
| Expected Tourists in Designated Area | | 907,564 |

| | |
|---|---|
| Estimated Displaced Population | 8,995,740 |
| Shelter in Place | 4,443,587 |
| Requiring Transportation Assistance | 145,098 |
| Requiring Shelter Assistance | 287,556 |

**Many aspects of disaster response are population driven**

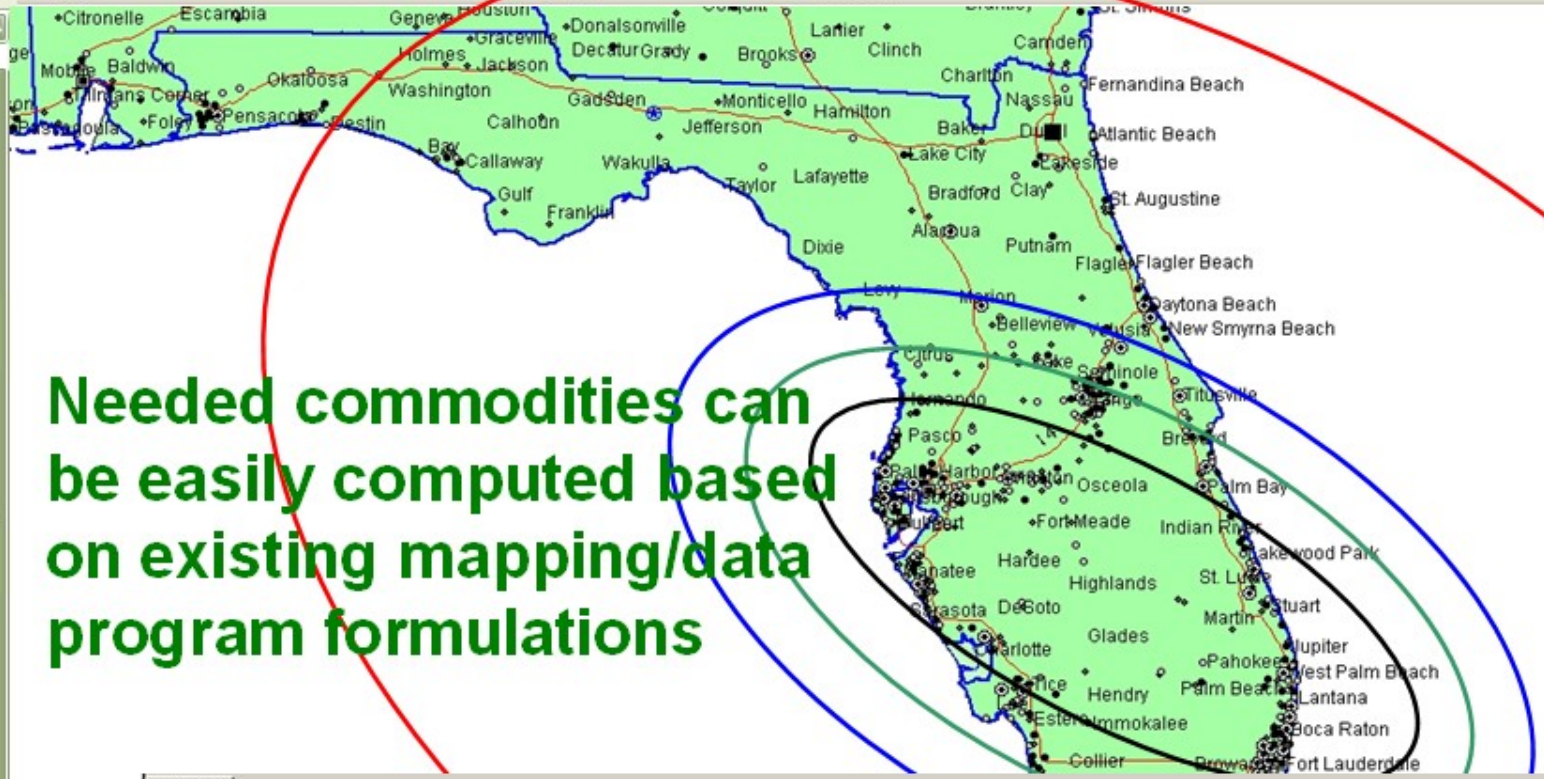
Food/MREs | Water | Ice | Blankets/Cots | Tarps | Fuel | Communications | Hospitals | Nursing Homes | Clinics | Fire Fighters | Ambulances

C:\Documents and Settings\David Hildreth\My Documents\New Folder

File Edit View Favorites Tools Help

Folders | Name | Size | Type | Date Modified

Zoom or Select Target Area




**Needed commodities can be easily computed based on existing mapping/data program formulations**

Zoom In
Zoom Out

Use Draw Tool

Population

Food/MREs

Water

| | | Liters/Day | Liters/72 Hrs. | Liters/Week |
|---|---|---|---|---|
| Requiring Transportation Assistance | 145,098 | | | |
| Requiring Shelter Assistance | 287,556 | 1,150,224 | 3,450672 | 8,051,568 |
| | Designated Area | 50 Miles | 100 Miles | 500 Miles |
| Locations Having Caches of Bottled Water | 67 | 142 | 265 | 1,987 |
| Liters of Water Available | 1,234,887 | 8,9987,333 | 17,886,900 | 26,998,678 |
| Estimated Time to Designated Area in Hours | 0 | 2.5 | 4.2 | 10.5 |

Click on the 'Locations Having Caches of Bottled Water' for Details and Quantities

C:\Documents and Settings\David Hildreth\My Documents\New Folder

File Edit View Favorites Tools Help

Folders

Name | Size | Type | Date Modified

Zoom or Select Target Area

**Tabs will contain summary information. Hyperlinks take the user to more detailed data.**

Zoom In
Zoom Out

Use Draw Tool

Locations Having Caches of Bottled Water

67 PODs within the target area containing bottled water appear here. Data will include address, quantity, POC, contact phones, etc.

Water

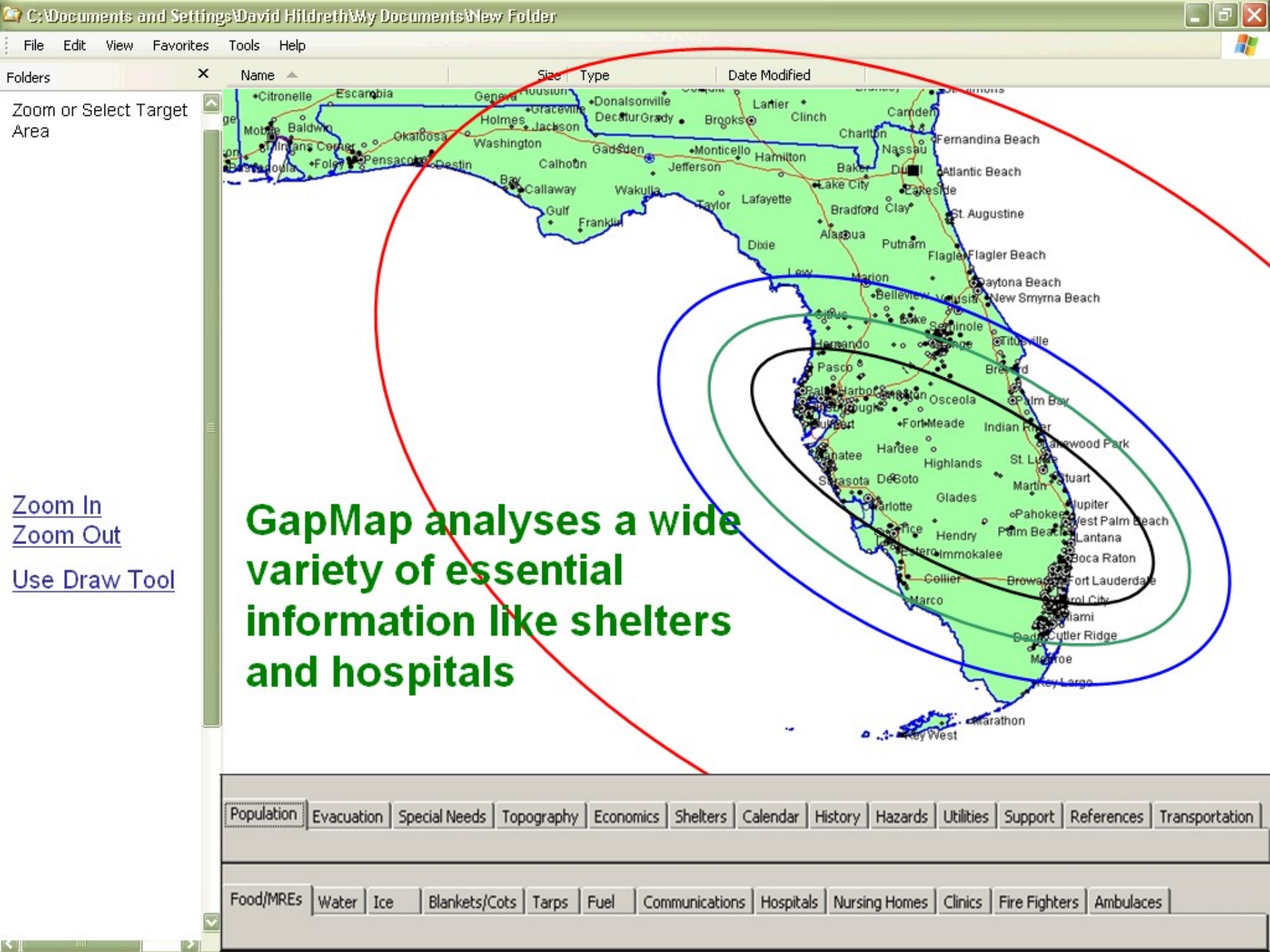
| | | Liters |
|---|---|---|
| Requiring Transportation Assistance | 145,098 | |
| Requiring Shelter Assistance | 287,556 | 1,150 |

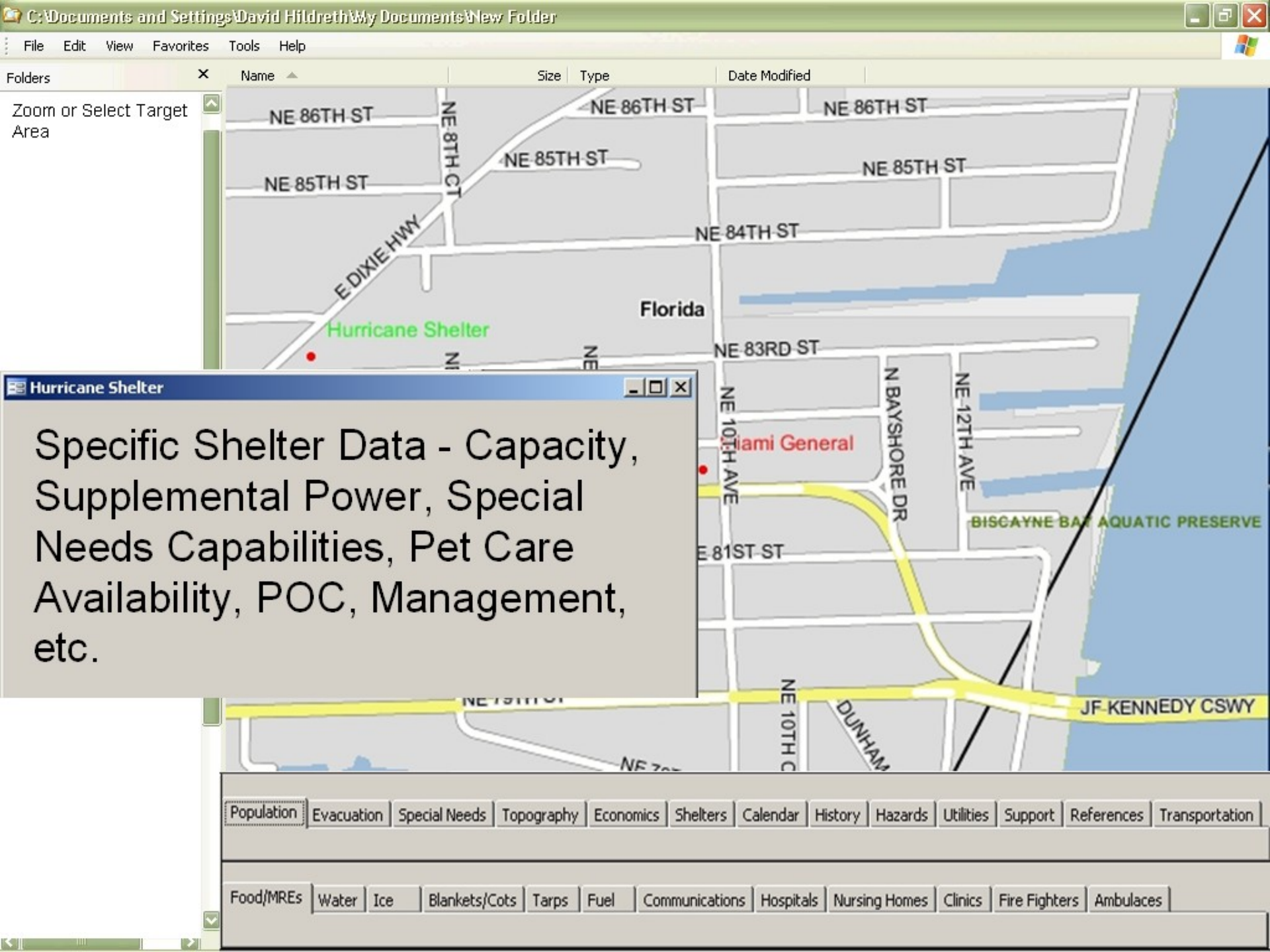
| | Designated Area | 50 Miles | 100 Miles | 500 Miles |
|---|---|---|---|---|
| Locations Having Caches of Bottled Water | 67 | 142 | 265 | 1,987 |
| Liters of Water Available | 1,234,887 | 8,9987,333 | 17,886,900 | 26,998,678 |
| Estimated Time to Designated Area in Hours | 0 | 2.5 | 4.2 | 10.5 |

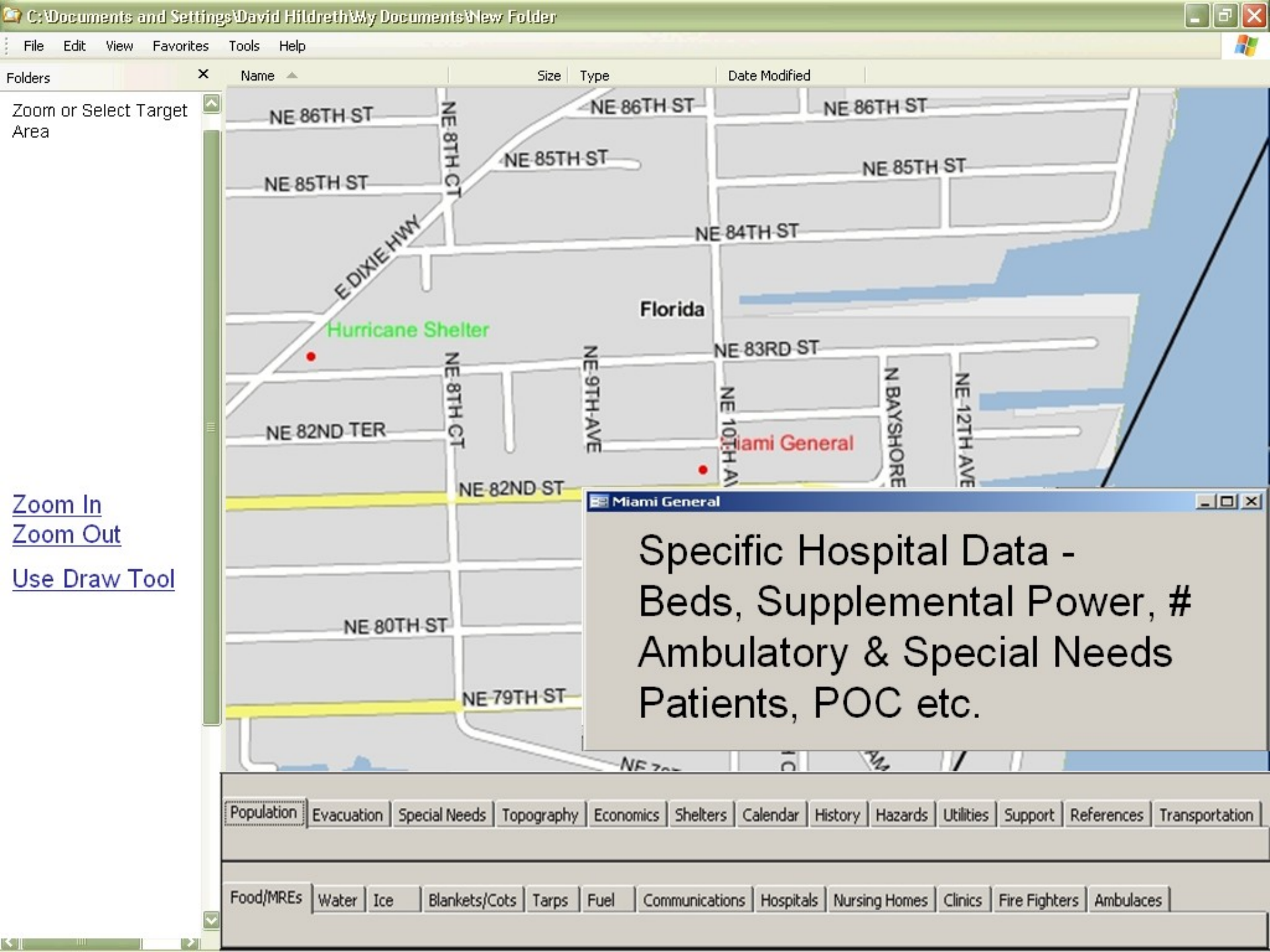
Click on the 'Locations Having Caches of Bottled Water' for Details and Quantities

Population

Food/MREs


C:\Documents and Settings\David Hildreth\My Documents\New Folder
File Edit View Favorites Tools Help
Folders
Name Size Type Date Modified
Zoom or Select Target Area
Zoom In
Zoom Out
Use Draw Tool
GapMap analyses a wide variety of essential information like shelters and hospitals
Population Evacuation Special Needs Topography Economics Shelters Calendar History Hazards Utilities Support References Transportation
Food/MREs Water Ice Blankets/Cots Tarps Fuel Communications Hospitals Nursing Homes Clinics Fire Fighters Ambulaces


C:\Documents and Settings\David Hildreth\My Documents\New Folder
File Edit View Favorites Tools Help
Folders
Name Size Type Date Modified
Zoom or Select Target Area
NE 86TH ST
NE 85TH ST
NE 8TH CT
E DIXIE HWY
NE 84TH ST
NE 83RD ST
Florida
Hurricane Shelter
N BAYSHORE DR
NE 12TH AVE
BISCAYNE BAY AQUATIC PRESERVE
JF KENNEDY CSWY
Hurricane Shelter
Specific Shelter Data - Capacity, Supplemental Power, Special Needs Capabilities, Pet Care Availability, POC, Management, etc.
Population
Evacuation
Special Needs
Topography
Economics
Shelters
Calendar
History
Hazards
Utilities
Support
References
Transportation
Food/MREs
Water
Ice
Blankets/Cots
Tarps
Fuel
Communications
Hospitals
Nursing Homes
Clinics
Fire Fighters
Ambulaces


C:\Documents and Settings\David Hildreth\My Documents\New Folder
File Edit View Favorites Tools Help
Folders
Name Size Type Date Modified
Zoom or Select Target Area
NE 86TH ST
NE 85TH ST
NE 84TH ST
NE 83RD ST
NE 82ND TER
NE 82ND ST
NE 80TH ST
NE 79TH ST
NE 8TH CT
NE 9TH AVE
NE 10TH AVE
N BAYSHORE
NE 12TH AVE
E DIXIE HWY
Florida
Hurricane Shelter
Miami General
Zoom In
Zoom Out
Use Draw Tool
Miami General
Specific Hospital Data - Beds, Supplemental Power, # Ambulatory & Special Needs Patients, POC etc.
Population
Evacuation
Special Needs
Topography
Economics
Shelters
Calendar
History
Hazards
Utilities
Support
References
Transportation
Food/MREs
Water
Ice
Blankets/Cots
Tarps
Fuel
Communications
Hospitals
Nursing Homes
Clinics
Fire Fighters
Ambulaces

# Next Steps

## Data Collection and Warehousing

- Develop Revised Templates
- Conduct Regional Workshops - Regions Determine Number of Workshops, Participants, Locations
- Oracle/Entellitrak/EMIMS

## Data Display

- Access to Other Databases – Census
- Modeling/Mapping – GapMap
- Data Analysis

## Timeline - Identify Each Step Along the Way, What It Does, What It Costs

# FEMA